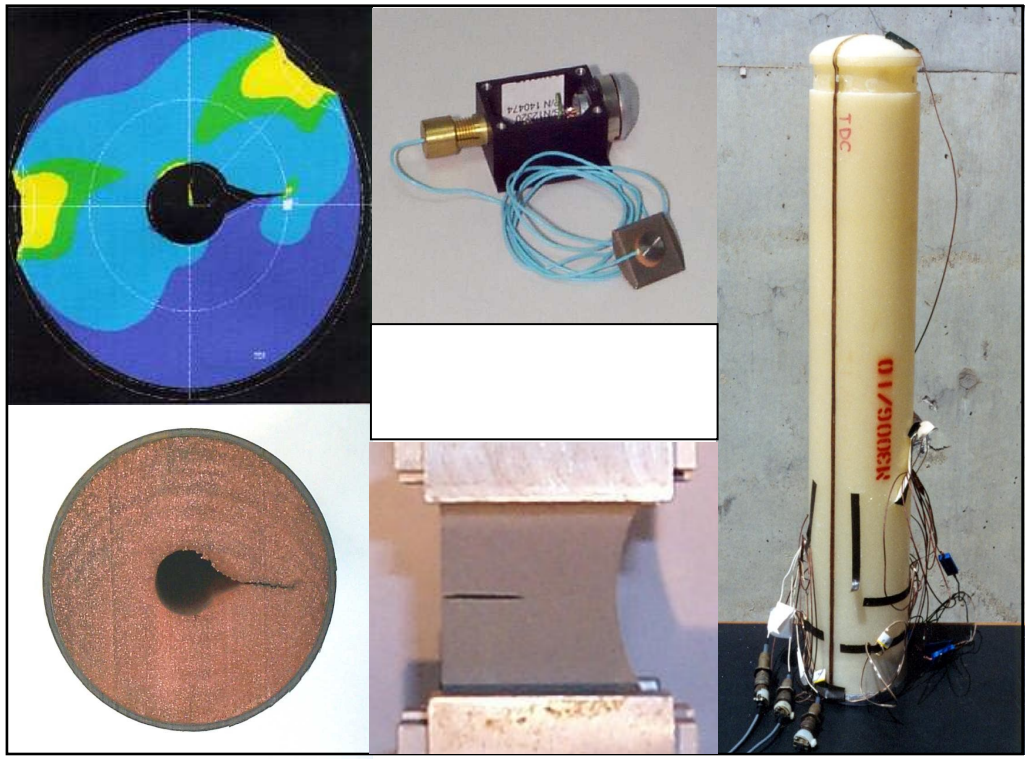
Service Life Assessment of Solid Rocket Motors
WPN TP4 - Energetic Materials and Propulsion



Program Name: Failure of Rocket Motors on Pressurization

Objective: Development of experimental and analytical techniques to predict failure of solid rocket grains under ignition pressurization conditions.

Payoff: Increased accuracy of predicted motor service life thus providing the military user with assurance of motor safety and the potential for life extension.

Participants:

DSTO DREV DSTL AFRL, NAWC, AMCOM, MICRON Instruments

Future Activities: Exploitation of analysis methods and sensor technology to develop motor health assessment capabilities.

Stress analysis and material characterization techniques were developed to predict propellant cracking. The predictions were verified through testing of analog motors instrumented with miniature bond stress sensors.

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